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Pholiota virescens, a new species from China

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Abstract — *Pholiota virescens*, a new species of *Pholiota* is described from China. It is characterized by its pileus with the green tone at maturity, and its prominent and conspicuously projecting pleurocystidia with thin wall.

Key words — *Agaricales*, *Strophariaceae*, taxonomy

Introduction

Pholiota (Fr.) P. Kumm. (*Agaricales*, *Strophariaceae*), established by Kummer in 1871, is a widespread genus (especially in the North Temperate Zone) with about 150 species worldwide (Kirk et al. 2008; Smith & Hesler 1968; Holec 2001; Noordeloos 2011).

There have been 55 taxa of *Pholiota* recorded in China (Tian & Bau 2004, 2005, 2011a,b; Bau et al. 2005), among which 20 species are edible (Dai et al. 2010) and 9 species are medicinal (Dai & Yang 2008). Recently, an additional new species was discovered during the research on the genus based on morphological examinations of collections.

Materials & methods

Specimens were examined by traditional taxonomic methods (Singer 1975). 5% KOH solution and Melzer's reagent were used as the mountants when examining the microstructure. Morphological characteristics of the species were described and illustrated according to the observations on the materials. Colour description for the new species refer to Kornerup & Wanscher (1978). The specimen studied is now deposited in the Herbarium of Mycology of Jilin Agricultural University (HMJAU).

Taxonomy

Pholiota virescens T. Bau & E.J. Tian, **sp. nov.** Plate 1, Figure 1

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Differs from *Pholiota velaglutinosa* by the green tone of its mature pileus and by the thin-walled pleurocystidia.

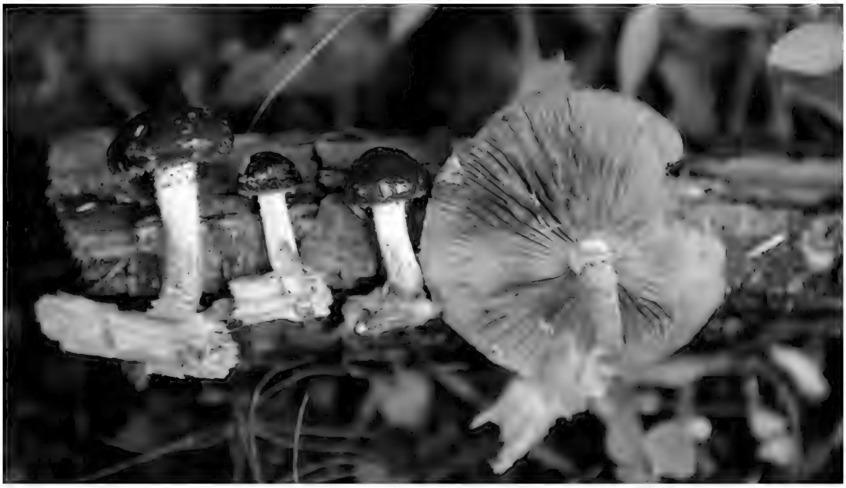

PLATE 1 *Pholiota virescens.*
Habit.

TYPE: China, Jilin Province, Hunchun City, Shengli Village, 5 km to the east, on decayed hardwood, 10 July 2010, Tolgor Bau & En-Jing Tian (**Holotype**, HMJAU 22498).

ETYMOLOGY: The species epithet *virescens* refers to the pileus color becoming green with maturity.

PILEUS 2.8–6.4 cm broad, convex, then becoming plane, even at the margin, viscid, dull vinaceous-brown over the disc at first, but becoming dull green towards the margin, glabrous except for brown floccose veil-remnants adhering along the margin. LAMELLAE adnate, near avellaneous, becoming dull cinnamon-brown to dull greenish-brown at maturity, dense, medium broad, edges even. STIPE 2–4.5 cm long, 0.4–0.5 cm thick, equal, solid, white above, becoming pale vinaceous to brownish below, dingy brown at base, with scattered patches of fibrils to fibrillose-squamulose below; Veil brown, fibrillose, evanescent, leaving an evanescent ring. CONTEXT thin, brownish, odor and taste mild. SPORE PRINT dull cinnamon-brown.

SPORES 6.2–7.2(–7.7) × 3.8–4.3(–5.3) µm, ellipsoid, oblong to ovate in face view, phaseoliform in side view, smooth, pale rusty to cinnamon-brown in KOH, slightly paler in Melzer's reagent, germ pore minute. BASIDIA 17–20 × 5–6 µm, (2–)4-spored, narrowly clavate, hyaline in KOH. CHRYSOCYSTIDIA absent. PLEUROCYSTIDIA 50–80 × 11–15 µm, fusoid-ventricose with obtuse to slightly acute apex, upper part elongated (up to 44 µm), wall thin, smooth, content homogeneous to collapsed, hyaline to tawny in KOH. CHEILOCYSTIDIA 24–44 × 8.5–10 µm, clavate, irregularly clavate to fusoid-ventricose, thin-walled, smooth, content homogeneous, hyaline to pale yellow in KOH. GILL TRAMA of parallel to subparallel hyphae hyaline in KOH and with smooth

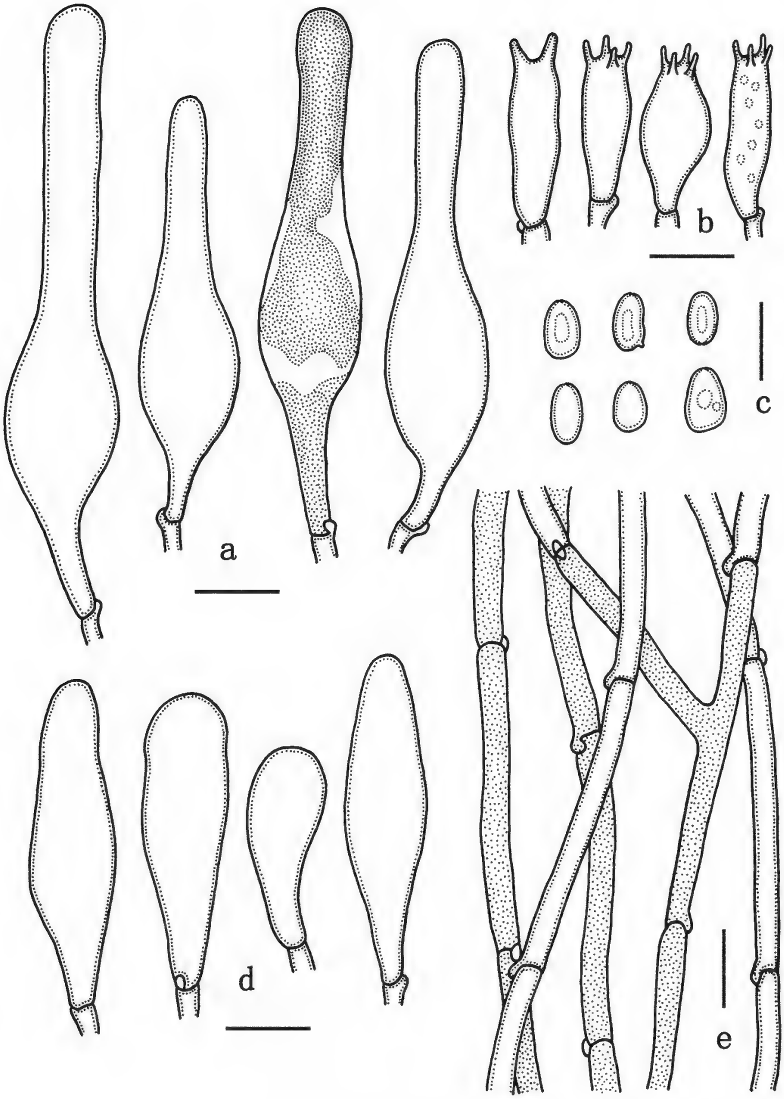

FIGURE 1 *Pholiota virescens*.
a, Pleurocystidia; b, Basidia; c, Basidiospores; d, Cheilocystidia; e, Pileipellis.
Bars = 10 µm.

walls, the cells inflated, up to 25 µm in diam.; subhymenium of gelatinized, interwoven hyphae. PILEUS CUTIS an ixocutis of hyphae 2.5–5 µm in diam., thin-walled, smooth to slightly encrusted, yellowish to pale tawny in KOH.

Context hyphae thin-walled, smooth, hyaline to yellowish in KOH. Clamp connections present.

Habit–Scattered on dead wood of hardwoods in summer.

Comments–This species belongs to the subgenus *Flammuloides* (Smith & Hesler 1968) based on its viscid pileus, prominent and conspicuously projecting cheilo- and pleurocystidia, and typically gelatinous subhymenium.

Pholiota virescens is similar to *P. velaglutinosa* A.H. Sm. & Hesler in young pileus color and basidiospore size and shape (Smith & Hesler 1968), but differs in the green tone in the mature pileus and the thin-walled pleurocystidia. It is also close to *P. vinaceobrunnea* A.H. Sm. & Hesler (Smith & Hesler 1968; Tian & Bau 2011a), which differs by its thick-walled pleurocystidia. *Pholiota lubrica* (Pers.) Singer is also similar, but its pileus is not dull vinaceous-brown but bright orange-brown (Noordeloos 1999; Holec 2001; Jacobsson 1990). *Pholiota velaglutinosa*, *P. vinaceobrunnea*, and *P. lubrica* are all known from China (Tian & Bau 2004, 2011a).

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